

Program for 2026 International Near East Conference on Electrical & Energy Systems (NEECON)

Time (Dubai)	Fursa Ballroom A	Fursa Ballroom B	Pre-Function Area
Wednesday, October 21			
07:30 am- 08:30 am			REG1 <u>Registration & Networking</u>
08:30 am- 10:30 am	WS1 <u>Workshop WS1: Machine Learning Applications in Renewable Energy Systems: Enhancing Performance through LCoE Analysis</u>	WS2 <u>Workshop WS2: From digitalization to digital transformation of the grid</u>	
10:30 am- 11:00 am			CB1 <u>Coffee Break & Networking</u>
11:00 am- 11:40 am	OPEN <u>Opening Ceremony & Sponsorship Awards</u>		
11:40 am- 12:10 pm	KN1 <u>Keynote Talk 1: Renewable Energy Integration in Smart Grid Environment</u>		
12:10 pm- 12:40 pm	KN2 <u>Keynote Talk 2: Powering the Future: Evolutionary AI from Renewable Energy Systems to Smart Cities</u>		
12:40 pm- 02:00 pm	LU1 <u>Lunch</u>		
02:00 pm- 02:30 pm	IT1 <u>Industry Talk 1: Next-Generation Distribution: Smart Grids in the Age of AI and Elec</u>		
02:30 pm- 04:00 pm	TS1 <u>Technical Session TS1</u>	TS2 <u>Technical Session TS2</u>	
04:00 pm- 04:30 pm			CB2 <u>Coffee Break & Networking</u>
04:30 pm- 06:30 pm	TS3 <u>Technical Session TS3</u>	TS4 <u>Technical Session TS4</u>	
06:30 pm- 07:00 pm	NET1 <u>Networking & Reception</u>		

Time (Dubai)	Fursa Ballroom A	Fursa Ballroom B	Pre-Function Area
Thursday, October 22			
07:30 am- 08:30 am			REG2 <u>Registration & Networking</u>
08:30 am- 09:00 am	IT3 <u>Industry Talk 3: Empowering Power Engineers with ETAP Electrical AI Copilot</u>		
09:00 am- 10:30 am	TS5 <u>Technical Session TS5</u>	TS6 <u>Technical Session TS6</u>	
10:30 am- 11:00 am			CB3 <u>Coffee Break & Networking</u>
11:00 am- 11:40 am	PAN1 <u>Panel Session: Grid readiness for high renewable penetration</u>		
11:40 am- 12:10 pm	IT2 <u>Industry Talk 2: From Smart Grids to Intelligent Energy Systems: Building the AI-Native, Resilient and Sustainable Grid of the Future.</u>		
12:10 pm- 12:40 pm	KN3 <u>Keynote Talk 3: Transforming Smart Cities Through Deep Learning and Digital Twins</u>		
12:40 pm- 02:00 pm	LU2 <u>Lunch</u>		
02:00 pm- 04:00 pm	TS7 <u>Technical Session TS7</u>	TS8 <u>Technical Session TS8</u>	
04:00 pm- 04:30 pm			CB4 <u>Coffee Break & Networking</u>
04:30 pm- 05:30 pm	PS1 <u>Poster Session PS1</u>	TS9 <u>Technical Session TS9</u>	
07:00 pm- 10:00 pm			GALA <u>Gala Dinner</u>
Friday, October 23			
07:00 am- 08:00 am			REG3 <u>Registration & Networking</u>

Time (Dubai)	Fursa Ballroom A	Fursa Ballroom B	Pre-Function Area
08:00 am- 10:00 am	TS10 <i>Technical Session TS10</i>	IEEE1 <i>IEEE Activities</i>	
10:00 am- 10:30 am			CB5 <i>Coffee Break & Networking</i>
10:30 am- 11:10 am	WIE <i>Women in Engineering & YP - Panel Session</i>	IEEE2 <i>IEEE Activities</i>	
11:10 am- 11:40 am	KN4 <i>Keynote Talk 4: Agentic AI and Intelligent IoT: Driving the Next Generation of Digital Transformation</i>	IEEE3 <i>IEEE Activities</i>	
11:40 am- 01:30 pm	LU3 <i>Lunch & Prayer</i>		
01:30 pm- 02:30 pm	PS2 <i>Poster Session PS2</i>	IEEE4 <i>IEEE Activities</i>	
02:30 pm- 04:30 pm	UGC <i>Undergraduate Innovation Project Competition</i>	IEEE5 <i>IEEE Activities</i>	
04:30 pm- 05:00 pm	AWD <i>Awards & Closing</i>		
05:00 pm- 05:30 pm			CCOF <i>Closing Coffee</i>

Wednesday, October 21

Wednesday, October 21 7:30 - 8:30

REG1: Registration & Networking

Room: Pre-Function Area

Wednesday, October 21 8:30 - 10:30

WS1: Workshop WS1: Machine Learning Applications in Renewable Energy Systems: Enhancing Performance through LCoE Analysis

Dr. Siddharth Joshi, SMIEEE

**Assistant Professor, School of Energy Technology, Pandit Deendayal Energy University
Non-executive Consultant**

Dr. Amee Daiya, SMIEEE

Freelance Data Scientist · Manager - AI & Computer Vision, Scintillant Technologies

Room: Fursa Ballroom A

WS2: Workshop WS2: From digitalization to digital transformation of the grid

**Dr. Tareg Ghaoud, SMIEEE, CEng, CSPO
Vice Chair, IEEE PES UAE Chapter**

Smart Grid Integration (SGI) Group Lead, DEWA R&D Center

Room: Fursa Ballroom B

Wednesday, October 21 10:30 - 11:00

CB1: Coffee Break & Networking

Room: Pre-Function Area

Wednesday, October 21 11:00 - 11:40

OPEN: Opening Ceremony & Sponsorship Awards

Opening Ceremony and Welcome Notes

Dr. Eesa Bastaki (President, University of Dubai)
Dr. Ali Alaleeli (VP Research & Development, Dubai Electricity & Water Authority)
Prof. Hussain Al-Ahmad (VPAA, University of Dubai)
Prof. Prof. Shadi Atalla (Dean, CEIT, University of Dubai)
Dr. Tareg Ghaoud (Group Lead, Smart Grid, DEWA R&D)

Sponsorship Awards

Room: Fursa Ballroom A

Wednesday, October 21 11:40 - 12:10

KN1: Keynote Talk 1: Renewable Energy Integration in Smart Grid Environment

Prof. Ramesh Bansal, SMIEEE

Professor, University of Sharjah, UAE
Extraordinary Professor, University of Pretoria, South Africa

Room: Fursa Ballroom A

Wednesday, October 21 12:10 - 12:40

KN2: Keynote Talk 2: Powering the Future: Evolutionary AI from Renewable Energy Systems to Smart Cities

Prof. Mohammed El-Abd, SMIEEE

Professor of Computer Engineering & Dean, College of Engineering and Applied Sciences,
American University of Kuwait

Room: Fursa Ballroom A

Wednesday, October 21 12:40 - 2:00

LU1: Lunch

Room: Fursa Ballroom A, Fursa Ballroom B, Pre-Function Area

Wednesday, October 21 2:00 - 2:30

IT1: Industry Talk 1: Next-Generation Distribution: Smart Grids in the Age of AI and Elec

Eng. Faris AtaAllah, Product Innovation Lead, SureFlow

Room: Fursa Ballroom A

Wednesday, October 21 2:30 - 4:00

TS1: Technical Session TS1

Electrical & Energy Systems

Room: Fursa Ballroom A

Chair: Abdul Haleem Medattil Ibrahim (Dubai Electricity and Water Authority, United Arab Emirates & Research and Development Centre DEWA, United Arab Emirates)

Actual Load Profiles Simulation of Feeders with Distributed Photovoltaic Generation

Ammar Al-Sabounchi (Dubai Electricity and Water Authority, United Arab Emirates); Mariam Alnuaimi (Dubai Electricity & Water Authority, United Arab Emirates); Muhannad Ashaar and Mahmoud Jaber (Dubai Electricity and Water Authority, United Arab Emirates); Amal Hammoudi and Khadija Al-Roken (Dubai Electricity & Water Authority, United Arab Emirates)

Design and Implementation of a Real- Time Embedded Wearable Health Monitoring System Using ESP32

Muhammad Inam ul Haq, Salamat Ali and Sabtain Hussain (The Islamia University of Bahawalpur, Pakistan); Ghulam Amjad Hussain (University of Dubai, United Arab Emirates); Zeeshan Ahmad Arfeen, Za (The Islamia University Bahawalpur,, Pakistan); Madia Safdar (Lappeenranta University Technology, Finland)

Maintenance and Reliability Considerations in Data Center Cooling Optimization

Ehsan Esmaeeli, Noha M. Hassan and Faisal Alkaabneh (American University of Sharjah, United Arab Emirates)

Bifacial PV Performance Under Extended Damp Heat for PERC, HJT, and TOPCon PV Modules

Ahmad Alheloo, Balaji Adothu and Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

Simulation of Tandem Solar Cells Using Measured Transmission Spectra from Soiled Glass Samples in Dubai: A 12-Week Study

Omar Albadwawi (Research and Development Centre, DEWA, United Arab Emirates); Ahmer AB Baloch (DEWA, United Arab Emirates); Bhaskar Parida (Dubai Electricity and Water Authority, United Arab Emirates); Sara Aldossary, Bashaer Shaibi and Rahaf Alabdali (Other, United Arab Emirates); Mohammad Alshawab and Aaisha Alnuaimi (DEWA, United Arab Emirates); Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

TS2: Technical Session TS2

Power, Energy & Renewables

Room: Fursa Ballroom B

Impact of Ingress Protection Rating on PV Module Reliability Under Combined Moisture and Mechanical Stress

Sonali Bhaduri, Balaji Adothu, Shahzada Pamir Aly and Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

Development and Experimental Validation of a Modular Power Hardware-in-the-Loop Testbed for Converter-Dominated Power Systems

Kannan Thirugnanam (DEWA R&D Centre, United Arab Emirates); Hamad Albeshr (Dubai Electricity and Water Authority, United Arab Emirates); Abdul Haleem Medattil Ibrahim (Dubai Electricity and Water Authority, United Arab Emirates & Research and Development Centre DEWA, United Arab Emirates); Sajan K Sadanandan and Tareg Ghaoud (Dubai Electricity and Water Authority, United Arab Emirates)

Detection and Localization of Incipient Faults Using Synchronized Measurements

Sajan K Sadanandan (Dubai Electricity and Water Authority, United Arab Emirates); Gagandeep Singh Dua (Dubai Electricity and Water Authority & R&D Center, United Arab Emirates); Tareg Ghaoud, Mohamed Jafar Ali Alansaari, Anwar Ayatha Parambil, Fatma Hussain and Fuad Abdulla (Dubai Electricity and Water Authority, United Arab Emirates); Lisa Danial and Lorenzo Zanni (Zaphiro Technologies SA, Switzerland)

A Synchrophasor-Inspired Feature Framework for Electric Vehicle Battery State-of-Health Estimation

Hassan Ali (UDST, Qatar); Muhammad Sheikh (University of Doha for Science and Technology, Qatar); Ghulam Amjad Hussain (University of Dubai, United Arab Emirates); Mutasim I H Nour (Heriot Watt University, United Arab Emirates)

Wednesday, October 21 4:00 - 4:30

CB2: Coffee Break & Networking

Room: Pre-Function Area

Wednesday, October 21 4:30 - 6:30

TS3: Technical Session TS3

Artificial Intelligence

Room: Fursa Ballroom A

Unison AI: A Multimodal AI-Enabled Cyber Threat Detection System for Multilingual and Gesture-Based Online Harm

Syeda Nizalia (University of West London, Ras Al Khaimah branch, United Kingdom (Great Britain))

SLHGN-Based RADAR for Observing Vessels and Submarines (SROVS)

Benny Benyamin Nasution (Politeknik Negeri Medan Indonesia & Direktorat Pendidikan Tinggi, Indonesia); Idham Kamil, Marlina Sari, Gunawan, Mardiana, Rini Indahwati and Indra Siregar (Politeknik Negeri Medan, Indonesia)

MedTrust Agent: A Zero-Trust, Observable LLM Agent Framework for Medical and Pharmaceutical Workflows

Bibin Prathap (Abu Dhabi Executive office, United Arab Emirates)

GenAI-Based Cybersecurity Adoption in Higher Education: A SWOT-Driven Responsible Implementation Framework

TS4: Technical Session TS4

Power, Energy and Renewables

Room: Fursa Ballroom B

Ammonium-Based Ionic Liquids with Wide Electrochemical Stability Window for Energy Storage Applications

Syed Nasir Shah (DEWA R&D Center Dubai Electricity & Water Authority (DEWA), United Arab Emirates); Rahmat Agung Susantyoko (Dubai Electricity and Water Authority, United Arab Emirates); Musbaudeen O. Bamgbopa, Ayoob Alhammadi and Tawaddod Alkindi (DEWA R&D Center Dubai Electricity & Water Authority (DEWA), United Arab Emirates); Ahmed Bahaa (National Korea Maritime and Ocean University, Korea (South)); Lethesh Kallidanthiyil Chellappan (Universiti Teknologi PETRONAS, Malaysia)

Topology-Aware Synchrophasor Coherency for Fault Detection in Distribution Networks

Hassan Ali (UDST, Qatar); Sheikh Mohammed Rayyan Iqbal, Afaq Gul and Saeed Abdullah Dar (University of Doha for Science and Technology (UDST), Qatar)

Hybrid Electron Transport Layer for Efficient Four-Terminal Perovskite/Si Tandem Solar Cells

Bhaskar Parida (Dubai Electricity and Water Authority, United Arab Emirates); Ahmer AB Baloch (DEWA, United Arab Emirates); Sanjit Manohar Majhi (NYU Abu Dhabi, United Arab Emirates); Omar Albadwawi (Research and Development Centre, DEWA, United Arab Emirates); Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

Intelligent Voltage Restoration in Hybrid Renewable Energy Grids: A Comparative Study of ANN and PI-Based Dynamic Voltage Restorers

Muhammad Hamza Qamar (Sukkur IBA University, Pakistan); Mohammad Rashed M. Altimania (University of Tabuk, Saudi Arabia); Zulifqar Ali Memon (Ajman University, United Arab Emirates); Hafiz Mudassir Munir, Faraz Ali and Hamza Javed (Sukkur IBA University, Pakistan)

Adaptive Translation Equations for Accurate Two-Diode PV Module Models

Shahzada Pamir Aly, Sonali Bhaduri, Baloji Adothu and Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

Accelerated Life Prediction of TOPCon PV Modules Under Thermal Cycling Test Conditions

Baloji Adothu, Shahzada Pamir Aly, Sonali Bhaduri, Ahmad Alheloo and Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

Physics-Informed Transformer Fault Diagnosis Using Dissolved Gas Analysis

Hassan Ali (UDST, Qatar); Ahmed Abu-Siada (Curtin University, Perth, WA, Australia)

Wednesday, October 21 6:30 - 7:00

NET1: Networking & Reception

Room: Fursa Ballroom A, Fursa Ballroom B, Pre-Function Area

Thursday, October 22

Thursday, October 22 7:30 - 8:30

REG2: Registration & Networking

Room: Pre-Function Area

Thursday, October 22 8:30 - 9:00

IT3: Industry Talk 3: Empowering Power Engineers with ETAP Electrical AI Copilot

Dr. Ahmed Saber, SMIEEE, PhD
Chair, IEEE Orange County Section

Vice President, Optimization and AI · ETAP, USA

Room: Fursa Ballroom A

Thursday, October 22 9:00 - 10:30

TS5: Technical Session TS5

Electrical & Energy Systems

Room: Fursa Ballroom A

Identifying Faults in 132 kV GIS Cable Terminations When PD is Inconclusive: A Multi-Modal, PD-Independent Diagnostic Approach

Saadat Ali (Dubai Electricity & Water Authority, United Arab Emirates); Rashid Abdulla Ahmed Alshehhi (DEWA, United Arab Emirates)

Genetic Algorithm-Optimized Quantum Neural Network for Solar PV Power Forecasting: A Multi-Model Benchmarking Study

Vikas Pratap Singh (EWEC, India)

Autonomous Energy Management of Distributed Virtual STATCOM-Dominated Distribution Networks Based on Grid-Forming Electric Vehicle Aggregators

Abbas Zare Ghaleh Seyyedi (Shiraz University of Technology, Iran); Mohsen Gitizadeh (Shiraz University of Technology, Iran); Mohammad Amin Nikkhah (Shiraz University of Technology, Iran)

Hybrid CNN-Transformer Architecture for Deepfake Video Detection Using Temporal Clip Sampling

Mohammed Aljallaf and Abdullah Ghanem Almarzooqi (University Of Dubai, United Arab Emirates); Abdulrahman Alkassim, Naser Suhail Mohamed Alsereidii and Hussam Al Hamadi (University of Dubai, United Arab Emirates)

Research Paper of Load Effectiveness in Heat (LVDB)

Abdulla Shahab (Dubai Electricity and Water Authority, United Arab Emirates); Hassan Al Hammadi (DEWA, United Arab Emirates); Kahlid Ahmed (Khalid.Ahmed, United Arab Emirates); Abdulla Al muhairi (DEWA, United Arab Emirates)

Ionic Migration vs. Static P-V Loci: MPPT Tracking Failures in Perovskite and Silicon Photovoltaic Systems

Usman Ahmed Siddiqui (GCS Pvt. Ltd, Pakistan); Raja Masood Larik (NED University of Engineering and Technology Karachi Sindh Pakistan, Pakistan); Sabina Abdul Hadi (University of Dubai, United Arab Emirates); Zeeshan Ahmad Arfeen, Za (The Islamia University Bahawalpur,, Pakistan); Zarmina Zafar (Technobiz Private Limited, Pakistan); Mehreen Kausar Azam (Pakistan Navy Engineering College, Pakistan)

TS6: Technical Session TS6

Power, Energy and Renewables

Room: Fursa Ballroom B

Integrated Electricity and Water System Planning: Emissions, Costs, and Reliability Trade-Offs in Dubai's Zero-Carbon Pathway

Osama Mussawar, Edwin Rodriguez-Ubinas and Mohamed Alantali (Dubai Electricity and Water Authority, United Arab Emirates); Sgouris Sgouridis (Dubai Water and Electricity Authority (DEWA), United Arab Emirates); Ahmed Osama Aly (Khalifa University of Science and Technology, United Arab Emirates); Andrei Sleptchenko (Khalifa University, United Arab Emirates)

Reliability Impact of Very Low Frequency Testing on Medium-Voltage Cable Circuits in the Electrical Network of Dubai

Mohammed Samir Abdelrazek (Dubai Electricity and Water Authority, United Arab Emirates); Ahmed Mohamed Alsahi Alzaabi and Hassan Al Hammadi (DEWA, United Arab Emirates); Mohamed Ali Kizhakkakath (Dubai Electricity and Water Authority (DEWA), United Arab Emirates); Abdulwahed Mohammed Ali (DEWA, United Arab Emirates); Sandeep Kerketta (Dubai Electricity and Water Authority (DEWA), United Arab Emirates)

A Battery-Health-Aware, Fault-Aware AI Framework for Solar-EV Charging Optimization: An Integrated System with Solar Forecasting, Panel Fault Detection, and IoT Deployment

Somya Khera and Spriha Podder (Manipal University Jaipur, India)

Adaptive-K Variational Mode Decomposition with Quantile LightGBM for Probabilistic Solar Power Forecasting and EV Charging Coupling

Somya Khera and Spriha Podder (Manipal University Jaipur, India)

Voltammetric and Iron Plating Characterization of Iron Redox Couples in Sulphate and Chloride Electrolytes for All-Iron Redox Flow Batteries

M Shariq Anwar (Dubai Electricity and Water Authority, United Arab Emirates); Arindam Sarkar (Indian Institute of Technology Bombay, India)

Grid Value of District Cooling Thermal Energy Storage for Decarbonization of Dubai's Electricity and Water System

Osama Mussawar and Edwin Rodriguez-Ubinas (Dubai Electricity and Water Authority, United Arab Emirates); Sgouris Sgouridis (Dubai Water and Electricity Authority (DEWA), United Arab Emirates)

Emirates); Ahmed Osama Aly (Khalifa University of Science and Technology, United Arab Emirates); Andrei Sleptchenko (Khalifa University, United Arab Emirates)

Comprehensive Harmonic Distortion Analysis of Electric Vehicle Chargers in Power Distribution Networks: A Case Study of Dubai Electricity & Water Authority

Hassan Al Hammadi (Dubai Electricity and Water Authority); Ahmed Al Marzooqi, Hamda Moosa, Sultan Hassan Mohamed Al Ali, Abdulaziz Alsumaiti, Khalid Khalid Alfalasi, Alaa Alhammadi, Fadi Odeh and Jareesh Chembakath (Dubai Electricity and Water Authority, United Arab Emirates)

Thursday, October 22 10:30 - 11:00

CB3: Coffee Break & Networking

Room: Pre-Function Area

Thursday, October 22 11:00 - 11:40

PAN1: Panel Session: Grid readiness for high renewable penetration

(Technical)

Moderator:

Dr. Tareq Ghaoud, Smart Grid Integration (SGI) Group Lead at DEWA

Panelists:

Dr Mohamed Labib Awad, VP Transmission Operation, DEWA

Dr Sohail Mian, Global Director- Power Systems and Design, Blake-Clough Consulting UK

Eng. Mohamad Almshkawi, Electrical Industry Process Expert, Siemens Energy, UAE

Prof. Ahmed Al-Durra, Associate Provost for Research, Khalifa University, UAE

Room: Fursa Ballroom A

Thursday, October 22 11:40 - 12:10

IT2: Industry Talk 2: From Smart Grids to Intelligent Energy Systems: Building the AI-Native, Resilient and Sustainable Grid of the Future.

Lt Gen (Retd) Dr. Anil Kapoor, AVSM, VSM, PhD

Strategic Advisor - DSAT Consulting Services (DCS)

Room: Fursa Ballroom A

Thursday, October 22 12:10 - 12:40

KN3: Keynote Talk 3: Transforming Smart Cities Through Deep Learning and Digital Twins

Prof. Abbas Amira

IET Fellow · HEA Fellow · IEEE Senior Member · ACM Senior Member

Associate Dean for Research and Knowledge Exchange, University of Wolverhampton, UK

Room: Fursa Ballroom A

Thursday, October 22 12:40 - 2:00

LU2: Lunch

Room: Fursa Ballroom A, Fursa Ballroom B, Pre-Function Area

Thursday, October 22 2:00 - 4:00

TS7: Technical Session TS7

Electrical & Energy Systems

Room: Fursa Ballroom A

Experimental and Numerical Investigation of Helium-Lifted Airborne Wind Turbine for Low-Wind Climates in the UAE

Shek Rahman, Salah Issa, Ahmed Amine Hachicha and Ali Radwan (University of Sharjah, United Arab Emirates)

Theoretical Investigation of Dielectric and Energy-Storage Properties of BZT-BCT/PLA and CaTiO₃/PLA Composites

Micheline Bejjani (American University in Dubai, United Arab Emirates)

Performance Tradeoffs of Clipping and Sub-Band Filtering in OFDM over Outdoor Free-Space Optical Channels

Safa Alghadi (Higher Colleges of Technology, United Arab Emirates); Shaima Alkaabi (United Arab Emirates University, United Arab Emirates); Walid Zgallai, Emad Abd-Elrady and Ali Al Bataineh (Higher Colleges of Technology, United Arab Emirates)

Real-Time Short Term Solar Power Forecasting Using Artificial Intelligence Techniques

Vikas Pratap Singh (EWEC, India)

Smart Green Technology of Onboard PV-Mounted Hybrid Electric Vehicles for Charging-Station Overcrowding Mitigation

Aya Eltayeb (United Arab Emirates University, United Arab Emirates); Randa Magzou (United Arab Emirates University, United Arab Emirates); Noura Alameri, Sara Alkhateri, Shaikha Alketbi, Khuloud A. Alharbi and Dalia Yousri (United Arab Emirates University, United Arab Emirates)

Do AI-Generated ECG Images Help? A Controlled Study of Diffusion-Based Data Augmentation for Arrhythmia Classification

Taimour Khan, Hamza Chaudhry, Waleed Nadeem, Hashaam Ijaz and Muhammad Wasim Nawaz (University of Management and Technology, Pakistan); Abigail Copiaco (University of Dubai, United Arab Emirates); Muhammad Mahboob Ur Rahman (KAUST, Saudi Arabia)

TS8: Technical Session TS8

Smart Industry and IoT

Room: Fursa Ballroom B

AquaSight: An AI-Driven IoT-Based Smart Water Monitoring System for Sustainable Water Management in the UAE

Samia Kouki (Higher Colleges of Technology, United Arab Emirates & LATICE Laboratory, Tunisia)

Automated Component Recovery and Custom Kit Assembly System for Educational Circuit Kits

Aman Mishra, Faseeh Mohammed and Judhi Prasetyo (Middlesex University Dubai, United Arab Emirates)

Real-Time IoT-Based Groundwater Monitoring System Using Multi-Sensor Node, Dual-Mode Connectivity and Cloud Dashboard

Muhammad Afzal (The Islamia University of Bahawalpur, Pakistan); Muhammad Waqar UI Hassan (The Islamia University of bahawalpur, Pakistan); Ghulam Amjad Hussain (University of Dubai, United Arab Emirates); Zeeshan Ahmad Arfeen, Za (The Islamia University Bahawalpur,, Pakistan); Zain ul Abiden Akhtar (The Islamia University of Bahawalpur, Pakistan); Zeeshan Rashid (Islamia University Bahawalpur, Pakistan)

Setpoint: Geopolitical Risk-Aware Control of Energy Storage for Resilient Grid Operation

Ayman Mohammed Mohamed Rafiq (University of Wollongong in Dubai, Australia); Kiyan Afsari (University of Wollongong in Dubai, United Arab Emirates); Abigail Copiaco (University of Dubai, United Arab Emirates)

Comparative Analysis of 2T, 3T, and 4T Perovskite-Silicon Tandem Photovoltaics Under AM1.5G Based and Dubai Outdoor Spectral Variations

Ahmer AB Baloch (DEWA, United Arab Emirates); Joshua Goldwin (University of Birmingham Dubai, United Arab Emirates); Bhaskar Parida (Dubai Electricity and Water Authority, United Arab Emirates); Omar Albadwawi (Research and Development Centre, DEWA, United Arab Emirates); Vivian Alberts (Dubai Electricity and Water Authority, United Arab Emirates)

Thursday, October 22 4:00 - 4:30

CB4: Coffee Break & Networking

Room: Pre-Function Area

Thursday, October 22 4:30 - 5:30

PS1: Poster Session PS1

Poster Session

Room: Fursa Ballroom A

Fusing Semantic Disagreement and Learned Frequency-Domain Features for Generator-Agnostic Synthetic Image Detection

Sara Ali Alshehhi (University Of Dubai, United Arab Emirates); Adnan Saif Alsalehi and Shuaib Alzarooni (University of Dubai, United Arab Emirates); Malak Alsattari (University Of Dubai, United Arab Emirates); Hussam Al Hamadi (University of Dubai, United Arab Emirates)

ARKYN: Adaptive Reconstruction and Knowledge Yield Network

Mohammad Al Mheiri and Amna Alameeri (University Of Dubai, United Arab Emirates); Nouf Yousuf Al Ali and Hussam Al Hamadi (University of Dubai, United Arab Emirates)

An Intelligent IoT-Enabled ESP32-Based System for Real-Time Electrical Power Monitoring, Protection, and Automatic Power Factor Correction

Muhammad Saim Yaseen (The Islamia University of Bahawalpur, Pakistan); Zeeshan Ahmad Arfeen, Za (The Islamia University Bahawalpur,, Pakistan); Ghulam Amjad Hussain (University of Dubai, United Arab Emirates); Muhammad Faiq (The Islamia University of Bahawalpur, Pakistan); Farhan Malik (Abu Dhabi Polytechnic, United Arab Emirates); Zain ul Abiden Akhtar (The Islamia University of Bahawalpur, Pakistan)

IoT-Based Energy Audit and Fault Detection System for Single-Phase Installations with Real-Time Waveform Capture and Cloud Dashboard

Muhammad Waqar UI Hassan (The Islamia University of bahawalpur, Pakistan); Muhammad Afzal (The Islamia University of Bahawalpur, Pakistan); Waqar Hassan (Eversource Energy, USA); Zeeshan Ahmad Arfeen, Za (The Islamia University Bahawalpur,, Pakistan); Ghulam Amjad Hussain (University of Dubai, United Arab Emirates); Bilal Asad (The Islamia University of Bahawalpur, Pakistan)

Atmospherically Resolved Simulation and Comparative Energy-Yield Analysis of Fixed-Tilt, Single-Axis, and Dual-Axis Solar Trackers

Mudit Agrawal, Jiya Pancholi, Pritam Das, Jaiwish Pandya, Vipin Shukla and Preeti Sharma (Pandit Deendayal Petroleum University, India)

ADAPT-Power: SOC-Adaptive Dynamic Priority Energy Management for Industrial Solar- Wind-Battery Microgrids

Astitva Gourav (Bharati Vidyapeeth deemed University, India)

TS9: Technical Session TS9

Digital Transformation

Room: Fursa Ballroom B

AI-Driven Digital Transformation of Integrated Management Systems for Predictive QHSE Risk Management Across Oil & Gas, Dredging, Marine and Construction Operations

DrFeroz Khan Ismail (United Arab Emirates)

Smart Home Control with Small Language Models on a Nvidia Jetson Orin Nano

Binyam Mamo, Samuel D. Tadesse, Woyessa Arsicha, Adel Oulefki and Shadi Atalla (University of Dubai, United Arab Emirates)

Sustainable Design and Optimization of a Stand-Alone Solar PV-Powered LED Streetlight System in the UAE

Shaymaa Y.i. Abushawish, Omailma Anwar Hasan Jarndal, Javeria Sajid, Ammar Hasan and Habib-ur Rehman (American University of Sharjah, United Arab Emirates)

Thursday, October 22 7:00 - 10:00

GALA: Gala Dinner

Venue will be announced soon.

Room: Pre-Function Area

Friday, October 23

Friday, October 23 7:00 - 8:00

REG3: Registration & Networking

Room: Pre-Function Area

Friday, October 23 8:00 - 10:00

IEEE1: IEEE Activities

Room: Fursa Ballroom B

TS10: Technical Session TS10

Power, Energy and Renewables

Room: Fursa Ballroom A

Impact of Semi-Transparent BIPV Glazing on the Energy, Thermal and Daylighting Performance of Offices in a Hot Arid Climate

Sherifa Alhayyas, Edwin Rodriguez-Ubinas, Noura Alhammadi and Mohamed Alantali (Dubai Electricity and Water Authority, United Arab Emirates); Mohammed Al-Neama (University of Sharjah, United Arab Emirates)

Power Transfer and Load Sharing Control for Battery/Fuel Cell Pairings During Microgrid Islanding

Rajitha Wattegama, Michael Short and Geetika Aggarwal (Teesside University, United Kingdom (Great Britain)); Fares Bettahar (University of Biskra, Algeria)

Comparative Evaluation of Linear Regression, Random Forest, and XGBoost for Long-Term Hourly PV Power Forecasting Using SAM-Simulated Data

Aarav Patel (Pandit Deendayal Petroleum University, India); Siddharth Joshi (Pandit Deendayal Energy University & APA Energy, India); Parth S Thakar (Pandit Deendayal Petroleum University, India)

Pareto-Based BESS Placement and Charging-Power Rating for Voltage-Constrained PV Hosting Capacity in Radial Distribution Networks

Shaima Ahmed Al Naqbi (United Arab Emirates)

Integrated Renewable Energy and Building Energy Management Systems for Sustainable Commercial Infrastructure

Paulson Geo Philip (UAE Television & Radio, Channel 4 group, United Arab Emirates)

Autonomous Buried Power Cable Tracing Using Electromagnetic Locator Feedback, Goal-Free Obstacle Avoidance, and GPS Mapping

Karan Raj Pant (Indian Institute of Technology Mandi, India); Mohit Vohra (Dubai Electricity and Water Authority, United Arab Emirates); Jagannath Prasad Sahoo (Indian Institute of Technology Mandi, India); Aditi Gupta (IIT MANDI HP, India); Jayakumar Vandavasi Karunamurthy (Dubai Electricity and Water Authority, United Arab Emirates); Amit Shukla (IIT, India)

Design of a Plug-and-Play Multi-Network Monitoring Device for Real-Time Substation and Distribution Network Applications with LTE CAT-M, NB-IoT, LoRaWAN, and Wi-Fi Connectivity

Balaji Ramachandran (Research and Development Centre, United Arab Emirates & Dubai Electricity and Water Authority, United Arab Emirates); Rizwan Mohammedhussain and Vinod Subramanian (Dubai Electricity and Water Authority, United Arab Emirates); Jayakumar Kamalakannan (Dubai Electricity and Water Authority (DEWA), United Arab Emirates); Jayakumar Vandavasi Karunamurthy (Dubai Electricity and Water Authority, United Arab Emirates); Madihah Ansum (University of Birmingham, United Kingdom (Great Britain))

Machine-Learning-Based Thermal Anomaly Detection for Underground Cable Joints in Power Distribution Networks

Mahmoud Rezk (Dubai Electricity and Water Authority & DEWA R&D, United Arab Emirates); Abdul Haleem Medattil Ibrahim (Dubai Electricity and Water Authority, United Arab Emirates & Research and Development Centre DEWA, United Arab Emirates); Varun Tiwari (DEWA, United Arab Emirates); Jerin James (Dubai Electricity and Water Authority (DEWA) R&D Centre, Dubai, UAE); Tareg Ghaoud (Dubai Electricity and Water Authority, United Arab Emirates); Mohmaed Ahmed Alhammedi, Ahmed Mohamed Alsahi Alzaabi and Hassan Al Hammadi (DEWA, United Arab Emirates)

Friday, October 23 10:00 - 10:30

CB5: Coffee Break & Networking

Room: Pre-Function Area

Friday, October 23 10:30 - 11:10

IEEE2: IEEE Activities

Room: Fursa Ballroom B

WIE: Women in Engineering & YP - Panel Session

Room: Fursa Ballroom A

Friday, October 23 11:10 - 11:40

IEEE3: IEEE Activities

Room: Fursa Ballroom B

KN4: Keynote Talk 4: Agentic AI and Intelligent IoT: Driving the Next Generation of Digital Transformation

Dr. Yassine Himeur, SMIEEE

Chair, IEEE UAE Joint Chapter for RAS, CSS & EMBS

Associate Professor, University of Dubai · Director, Master of Electrical Engineering

Room: Fursa Ballroom A

Friday, October 23 11:40 - 1:30

LU3: Lunch & Prayer

Room: Fursa Ballroom A, Fursa Ballroom B, Pre-Function Area

Friday, October 23 1:30 - 2:30

IEEE4: IEEE Activities

Room: Fursa Ballroom B

PS2: Poster Session PS2

Room: Fursa Ballroom A

Predictive Current Shaping for Copper-Loss Reduction in DC Servo Actuators

Astitva Gourav (Bharati Vidyapeeth deemed University, India)

A Small Local Language Model for Comfort-Aware Cooling and Peak Demand Response in a Simulated University Building

Michael Gelaw, Yared Zewde, Dagim Taye, Adel Oulefki, Shadi Atalla and Yassine Himeur
(University of Dubai, United Arab Emirates)

Learning When to Transfer: Robust Solar Power Forecasting Under Capacity Mismatch

Dina Belay, Binyam Mamo, Samuel D. Tadesse, Nour Aburaed and Sabina Abdul Hadi (University of Dubai, United Arab Emirates)

Hidden Economic Risks in Kazakhstan's Solar Transition

Ali-Mansur Valiyev (Dubai College, United Arab Emirates)

Intelligent Fault Detection of Generator Stator Windings Using Radial Basis Function Neural Network (RBFNN)

Noora Aljallaf (Rochester Institute of Technology, United Arab Emirates); Abdulla Ismail (Sharjah, United Arab Emirates); Haris M Khalid (University of Dubai, United Arab Emirates & University of

Johannesburg, South Africa)

Machine Learning and AI Frameworks in Smart Grid Communication Architectures: Optimization, Security, Management Research Gaps, and Solutions

Zeina Bahij and AbdelHamid Darweesh (Rochester Institute of Technology, United Arab Emirates); Abdulla Ismail (Sharjah, United Arab Emirates); Haris M Khalid (University of Dubai, United Arab Emirates & University of Johannesburg, South Africa)

The Global Pandemic and Geo-Political Tensions Driven Impact on the Energy Sector: A Multi-Technique Review

AbdelHamid Darweesh and Zeina Bahij (Rochester Institute of Technology, United Arab Emirates); Abdulla Ismail (Sharjah, United Arab Emirates); Haris M Khalid (University of Dubai, United Arab Emirates & University of Johannesburg, South Africa)

Friday, October 23 2:30 - 4:30

IEEE5: IEEE Activities

Room: Fursa Ballroom B

UGC: Undergraduate Innovation Project Competition

Room: Fursa Ballroom A

Friday, October 23 4:30 - 5:00

AWD: Awards & Closing

Room: Fursa Ballroom A

Friday, October 23 5:00 - 5:30

CCOF: Closing Coffee

Room: Pre-Function Area

Program last updated on [10:20 UTC](#)